

Epidemiology of Road Traffic Fatalities Among Agricultural Vehicle Users in East Azerbaijan, Iran (2006 - 2016)

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Dear Editor,

The agricultural industry is one of the most hazardous industries. The combination of causes in the agricultural industry determines the potential to damage (1). Serious agricultural accidents in Iran are growing (2). Tractor accidents are divided into accidents from a tractor and other objects caught among a tractor and a connected device or vehicle that moves on leverage (3). Iran is a developing country moving towards industrial development and Tabriz, as a metropolis, has an important role in this progress expecting an accountable number of occupational accidents to occur through this process (4). This city has many vast rural areas where farmers mostly use agricultural machinery. A descriptive study on AVUs (agricultural vehicle users) fatalities was performed in East Azerbaijan based on data registered in the East Azerbaijan forensic medicine organization as a governmental center. The inclusion criteria included evaluation on all deaths that occurred through road traffic accidents among farmers. A total of 9 435 fatal traffic injury cases were registered in the database through the Iranian Shamsi calendar years of 1385 - 1394, which is equivalent to the time period between March 2006 and March 2016. The most common mechanism of accidents was rollover, comprising 86% of the cases. Head trauma was the leading factor of death, accounting for 51.3% of the cases (39 victims). Bleeding was more common as the main cause of death among those who died prior either at the accident site or while being transferred to the hospital ($P = 0.01$).

A decreasing trend of fatal traffic accidents was observed over the study period with some ups and downs for AVU traffic mortalities (Figure 1).

The national coalition for agricultural safety and health (NCASH) declared that overturning of tractors are the main cause of fatalities among farmers (5). Rorat et al. stated that in order to avoid agricultural accidents, ef-

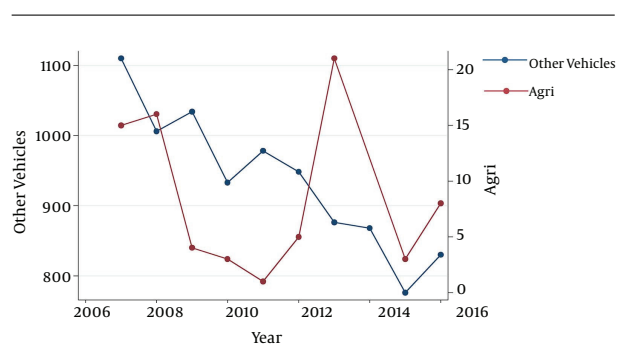


Figure 1. Trend of Mortalities Compared for AVU Traffic Injuries and Other Traffic Injuries in East Azerbaijan Province of Iran (March 2006 - March 2016)

fort should be made to improve the engineering of roads, proper training for workers, particularly migrant labors, and use of personal protective essentials (6). According to the current report, most of the accidents were rollovers of agricultural vehicles. It seems that driving in rugged land and special conditions of the tractor can lead to accidents by rollover. According to the results on the causes of deaths from agricultural vehicle users, head trauma was the main cause of death among farmers. Mortality of farmers in the present report was mostly associated with the rollover of farm machinery; most of the victims were drivers. Due to the fact that lack of proper driving training, non-use of personal protective equipment, low literacy rate, and young age of AVUs were the prominent features in AVU fatalities, safety promotion programs could focus on these characteristics. A subsidiary program of renovating the old agricultural machinery in use or improving the safety through adding protective equipment and structures could be of help to reduce AVU fatalities.

Footnote

Conflict of Interest: The authors had no conflict of interest in this study to declare.

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